

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

ALFRED T. GIULIANO, Chapter 7
Trustee of the Ritz Estate; CPM
ELECTRONICS INC.; E.S.E.
ELECTRONICS, INC.; and MFLASH, INC.,
on Behalf of Themselves and All Others
Similarly Situated,

Plaintiffs,

vs.

SANDISK CORPORATION,

Defendant.

Case No: C 10-02787 SBA

**ORDER DENYING MOTION TO
EXCLUDE AND GRANTING IN
PART MOTION TO CERTIFY
CLASS AND FOR APPOINTMENT
OF CLASS COUNSEL**

UNDER SEAL

Docket 240, 259

Plaintiffs¹ bring the instant putative class action against SanDisk Corporation (“SanDisk”) alleging claims for relief under § 2 of the Sherman Antitrust Act (“Sherman Act”), 15 U.S.C. § 2. The parties are presently before the Court on Plaintiffs’ motion to certify class and for appointment of class counsel under Rule 23 of the Federal Rules of Civil Procedure. SanDisk opposes the motion. Also before the Court is SanDisk’s motion to exclude the report and testimony of Plaintiffs’ expert, Ryan Sullivan, Ph.D. (“Dr. Sullivan”), under Rule 702 of the Federal Rules of Evidence and Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993). Plaintiffs oppose the motion. Having read and considered the papers filed in connection with these matters and being fully informed, the Court hereby DENIES SanDisk’s motion to exclude and GRANTS IN PART Plaintiffs’ motion to certify class and for appointment of class counsel, for the reasons stated below.

¹ The named Plaintiffs in this action are Alfred T. Giuliano, Chapter 7 Trustee to the Ritz Estate (“Ritz”), CPM Electronics Inc. (“CPM”), E.S.E. Electronics, Inc. (“ESE”), and MFLASH, Inc. (“MFLASH”) (collectively, “Plaintiffs”).

1 The Court, in its discretion, finds these matters suitable for resolution without oral
2 argument. See Fed.R.Civ.P. 78(b); N.D. Cal. Civ. L.R. 7-1(b).

3 **I. BACKGROUND**

4 The parties are familiar with the facts of this case, which are summarized herein
5 only to the extent they are pertinent to the motions pending before the Court.

6 SanDisk is a Delaware corporation headquartered in Milpitas, California. It designs,
7 develops, and manufactures data storage solutions using flash memory, controller firmware,
8 and software technologies. SanDisk owns numerous patents on aspects of NAND flash
9 memory and related technology. SanDisk relies on its patents to manufacture and sell
10 NAND flash memory products. Through its joint venture with Toshiba Corporation
11 (“Toshiba”), SanDisk manufactures NAND flash memory chips that it either: (1) sells
12 directly to manufacturers or retailers; or (2) combines with other components into final
13 flash products that it sells to retailers who then sell the products to consumers. Plaintiffs
14 are direct purchasers of final flash products from SanDisk, which include solid state drives
15 (“SSD”), memory cards, wireless memory, USB storage, embedded storage (for devices
16 such as mobile phones and tablets), and music and video players.

17 NAND flash memory is a form of non-volatile² erasable memory that can store large
18 amounts of data. NAND flash memory comes in two forms: flash chips and final flash
19 products. NAND flash chips are basic flash memory. They function by storing “bits” of
20 data in “cells” contained on the chip. NAND flash chips come in the form of a wafer, die,
21 or packaged die. NAND flash chips can be combined with additional components,
22 software, or firmware to make final flash products that are eventually sold to consumers.
23 NAND flash memory is incorporated into a variety of end-user products, including mobile
24 phones, tablets, global positioning systems, portable and home gaming systems, and
25 personal computers.

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28 ² Flash memory is non-volatile, meaning that data is not lost when there is no power.

1 Worldwide sales of NAND flash chips increased from \$200 million in 1997 to \$18.1
2 billion in 2009 to \$33.1 billion in 2013. Over the same period, the price per gigabit (“Gb”)
3 of NAND flash chips decreased from \$952.60 in 1997 to \$0.27 in 2009 to \$0.08 in 2013.
4 Due to rapidly declining prices and the adoption of NAND flash for more applications, total
5 NAND flash output increased from 0.0002 billion Gb in 1997 to 67.7 billion Gb in 2009 to
6 412.9 billion Gb in 2013.

7 In the instant action, Plaintiffs bring claims against SanDisk for monopolization and
8 attempted monopolization in violation of § 2 of the Sherman Act. Plaintiffs’ antitrust
9 claims are known as Walker Process claims because they are predicated on SanDisk’s
10 alleged use of fraudulently procured patents to obtain or attempt to obtain monopoly power.
11 In Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172 (1965), the
12 Supreme Court “established that antitrust liability under section 2 of the Sherman Act may
13 arise when a patent has been procured by knowing and willful fraud, the patentee has
14 market power in the relevant market, and has used its fraudulently obtained patent to
15 restrain competition.” C.R. Bard, Inc. v. M3 Systems, Inc., 157 F.3d 1340, 1367 (Fed. Cir.
16 1998).

17 As relevant to the motions before the Court, Plaintiffs allege that at least 75% of all
18 NAND flash chips and final flash products imported into or sold in the United States are
19 either: (a) manufactured and sold by SanDisk or its controlled and licensed joint venture
20 with Toshiba; or (b) manufactured by other licensees of patents for NAND flash memory
21 technology claimed to be owned by SanDisk. Plaintiffs assert that SanDisk has maintained
22 a monopoly in the relevant market for final flash products,³ or has attempted to monopolize
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27 ³ While Plaintiffs allege that SanDisk has maintained a monopoly in the relevant
28 market for NAND flash chips, or has attempted to monopolize this market, they only move
to certify a class of direct purchasers of final flash products.

1 this market, by fraudulently procuring two patents relating to flash memory technology,⁴
2 and using those patents (collectively, “the Disputed Patents”) to restrain competition by
3 asserting their infringement. Specifically, Plaintiffs assert that SanDisk relied on its
4 patents, including the Disputed Patents, to “force” other flash memory manufacturers to
5 enter into license agreements in exchange for royalty fees, and to exclude any competitors
6 that SanDisk had not granted a license. According to Plaintiffs’ expert, Dr. Sullivan, by the
7 end of the licensing negotiations, SanDisk was receiving royalties and profits on 88% to
8 100% of all final flash products sold worldwide. Plaintiffs allege that, by virtue of
9 SanDisk’s restraint on competition through the enforcement of the Disputed Patents,
10 purchasers of final flash products from SanDisk paid supra-competitive, monopoly prices
11 for such products.

12 Plaintiffs’ theory of monopoly power is that SanDisk was able to charge supra-
13 competitive prices and restrict output in the upstream final flash product market by raising
14 its competitors’ costs in the downstream NAND flash chip market through the enforcement
15 of the Disputed Patents and the extraction of royalty payments from its competitors in that
16 market. According to Plaintiffs, the increased costs from the royalties SanDisk charged to
17 its competitors in the NAND flash chip market were passed through to manufacturers of
18 final flash products who, in turn, passed through the increased costs to consumers of final
19 flash products. Plaintiffs assert that SanDisk responded to the increased prices charged by
20 its competitors in the final flash market by raising its prices for final flash products and
21 “pocket[ing] the overcharge.”⁵ Plaintiffs maintain that SanDisk’s market power in the
22 upstream NAND flash chip market allowed it to exercise monopoly power in the

23 ⁴ The Disputed Patents are U.S. Patent No. 5,172,338 (“the ‘338 patent”), and U.S.
24 Patent No. 5,991,517 (“the ‘517 patent”). The ‘338 patent was issued in 1992, while the
25 ‘517 patent was issued in 1999. Both patents expired in 2009. Plaintiffs contend that
26 SanDisk procured the Disputed Patents by intentionally making material misrepresentations
to, and withholding prior art from, the Patent and Trademark Office (“PTO”).

27 ⁵ According to Plaintiffs, “[b]ecause SanDisk and its licensees made up more than
28 88% of the market, SanDisk was able to raise its own prices. . . . Essentially, if all its
licensees charged a higher price, SanDisk could too. But, because it did not have to pay a
royalty itself, SanDisk could keep these supra-competitive profits.”

1 downstream final flash product market because it controlled the cost of a necessary input in
2 the downstream market, i.e., NAND flash chips.

3 Plaintiffs define the relevant product market for final flash products as “the market
4 for final flash products, the manufacture, sale, or importation of which is subject to the
5 reach of the U.S. patent laws.” The market for final flash products includes the following
6 submarkets based on product categories: SSD, memory cards, wireless memory, USB
7 storage, embedded storage, and music and video players. Similarly, Plaintiffs define the
8 relevant product market for NAND flash chips as “the market for flash chips, the
9 manufacture, sale, or importation of which is subject to the reach of the U.S. patent laws.”
10 Plaintiffs allege that purchasers of NAND flash chips and final flash products may buy such
11 products only from SanDisk or its licensees, or must buy products that do not practice any
12 SanDisk patent. Plaintiffs further allege that because purchasers of NAND flash chips and
13 final flash products do not regard other types of memory as substitutes for NAND flash
14 memory, they could not switch to other types of memory in response to a small but
15 significant increase in the price of NAND flash memory in the relevant product markets.
16 According to Plaintiffs, with its controlled and licensed Toshiba joint venture and its other
17 controlled licensees of NAND patented technology, SanDisk had the power to control
18 prices in, and restrict entry into, the relevant product markets during the class period, and
19 maintained a monopoly in the relevant product markets during the class period for NAND
20 flash chips and final flash products.

21 Plaintiffs define the relevant geographic market for the purchase of NAND flash
22 chips and final flash products as worldwide. Plaintiffs refer to the “relevant markets” as:
23 (1) the worldwide market for NAND flash chips, the manufacture, sale, or importation of
24 which is subject to the reach of the United States patent laws; and (2) the worldwide market
25 for final flash products, the manufacture, sale, or importation of which is subject to the
26 reach of the United States patent laws. Plaintiffs allege that the relevant markets are
27 characterized by high barriers to entry and expansion as a result of, among other things,
28 SanDisk’s claimed ownership of United States patents covering the technology necessary to

1 manufacture NAND flash memory; SanDisk's unlawful assertion of the Disputed Patents to
2 control entry and expansion within the relevant markets; and the extremely high costs
3 necessary to enter the relevant markets. According to Plaintiffs, the construction of a flash
4 memory fabrication facility can cost billions of dollars, and the plant may need to be
5 retooled every five years.

6 Through this action, Plaintiffs seek to recover damages for the supra-competitive
7 prices they and the absent class members allegedly paid for SanDisk's final flash products
8 due to the anticompetitive royalty that SanDisk imposed using the Disputed Patents.
9 Plaintiffs assert that "but for" the Disputed Patents, members of the proposed class would
10 have paid less for final flash products purchased from SanDisk. According to Plaintiffs,
11 SanDisk overcharged the putative class members at least \$72 million on sales of final flash
12 products.

13 Pursuant to Rule 23, Plaintiffs now move for certification of a "Final Flash Product
14 Class" defined, in part, as: "All persons and entities residing in the United States who, on or
15 after July 1997,⁶ directly purchased from SanDisk, or from its controlled and licensed joint
16 venture with Toshiba Corporation, final flash products."⁷ In addition to seeking class
17 certification, Plaintiffs also move for an order appointing class counsel. In support of their
18 motion for class certification, Plaintiffs have submitted the expert report of Dr. Sullivan to
19 show, among other things, that antitrust impact and damages can be proved through
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21 ⁶ The operative complaint defines the Final Flash Products Class, in part, as all
22 "persons residing in the United States who, on or after *June 25, 2006*, directly purchased
23 from SanDisk, or from its controlled and licensed joint venture with Toshiba Corporation,
24 final flash products using technology claimed to be patented by SanDisk ('Final Flash
Product Class')." (Emphasis added). Below, the Court will discuss whether it is proper for
Plaintiffs to seek to certify a class that is broader than the class defined in the operative
complaint.

25 ⁷ The proposed class definition further states: "Such products include, without
26 limitation, those that SanDisk sold to retail firms, OEMs, and distributors. Purchases of
27 final flash products that contain a microcontroller - a semiconductor that interfaces with
28 electronic equipment and operates the flash memory - are included in the class. Purchases
of flash memory combined with dynamic random access memory ('DRAM'), flash memory
combined with static random access memory ('SRAM'), or flash memory combined with a
microprocessor ('system on a chip') are excluded from the class."

evidence common to the proposed class. SanDisk opposes Plaintiffs' motion for class certification, and has filed a motion to exclude the expert report and testimony of Dr. Sullivan under Rule 702 and Daubert.

II. LEGAL STANDARDS

A. Expert Testimony

When an expert report is challenged at the class certification stage, the evidentiary standard set forth in Daubert applies. Ellis v. Costco Wholesale Corp., 657 F.3d 970, 982 (9th Cir. 2011). Under Daubert, the trial court must act as a "gatekeeper" to exclude junk science that does not meet the requirements set forth in Federal Rule of Evidence 702. Id.

Rule 702 provides:

[A] witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the expert has reliably applied the principles and methods to the facts of the case.

Fed.R.Evid. 702.

The trial court performs a "gatekeeping" function to ensure that the expert's proffered testimony is both reliable and relevant to the task at hand. Daubert, 509 U.S. at 592-593. In performing its gatekeeping function, the trial court is required to make "a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue." Id.; see also Ellis, 657 F.3d at 982 ("Under Daubert, the trial court must act as a 'gatekeeper' to exclude junk science that does not meet Federal Rule of Evidence 702's reliability standards by making a preliminary determination that the expert's testimony is reliable"). "Daubert does not require a court to admit or to exclude evidence based on its persuasiveness; rather it requires a court to admit or exclude evidence

1 based on its scientific reliability and relevance. Thus, an expert's 'inference or assertion
2 must be derived by the scientific method' to be admissible." Ellis, 657 F.3d at 982.

3 A trial court has broad latitude in determining whether an expert's testimony is
4 reliable and in deciding how to determine the testimony's reliability. Ellis, 657 F.3d at 982;
5 The reliability factors identified in Daubert - testing, peer review, error rates, and
6 acceptability in the relevant scientific community - are not exhaustive; the Court's task is
7 not to apply Daubert as "a definitive checklist or test," but to "make certain that an expert .
8 . . employs in the courtroom the same level of intellectual rigor that characterizes the
9 practice of an expert in the field." See Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152
10 (1999). Evidence should be excluded as unreliable if it "suffer[s] from serious
11 methodological flaws." Obrey v. Johnson, 400 F.3d 691, 696 (9th Cir. 2005).

12 To be relevant, expert testimony must "assist the trier of fact." Daubert, 509 U.S. at
13 591. " 'Expert testimony which does not relate to any issue in the case is not relevant and,
14 ergo, non-helpful.' " Id. Expert testimony must be sufficiently tied to the facts of the case
15 such that it will aid in determining a fact in issue. Id. This consideration has been
16 described as one of "fit." Id. " 'Fit' is not always obvious, and scientific validity for one
17 purpose is not necessarily scientific validity for other, unrelated purposes." Id.

18 The inquiry envisioned by Rule 702 is a flexible one. Its overarching subject is the
19 scientific validity and thus the evidentiary relevance and reliability of the principles that
20 underlie a proposed submission. Daubert, 509 U.S. at 594-595. The focus must be solely
21 on principles and methodology, not on the conclusions that they generate." Id. at 595; see
22 Primiano v. Cook, 598 F.3d 558, 564 (9th Cir. 2010) ("The test under Daubert is not the
23 correctness of the expert's conclusions but the soundness of his methodology."). The
24 proponent of expert testimony has the burden of establishing that the requirements for
25 admissibility are met by a preponderance of the evidence. Fed.R.Evid. 702, Advisory
26 Committee's Note to the 2000 Amendments. When the expert meets the threshold
27 established by Rule 702 as explained in Daubert, the expert may offer testimony and the
28 jury decides how much weight to give that testimony. Primiano, 598 F.3d at 565. "Shaky

1 but admissible evidence is to be attacked by cross examination, contrary evidence, and
2 attention to the burden of proof, not exclusion.” Id. at 564.

3 **B. Class Certification**

4 A class action is “an exception to the usual rule that litigation is conducted by and on
5 behalf of the individual named parties only.” Califano v. Yamasaki, 442 U.S. 682, 700-701
6 (1979). To come within the exception, the party seeking to maintain a class action “must
7 affirmatively” demonstrate compliance with Rule 23. Wal-Mart Stores, Inc. v. Dukes, 131
8 S.Ct. 2541, 2551 (2011). Rule 23 “does not set forth a mere pleading standard.” Id.
9 Rather, a party must “be prepared to prove that there are in fact sufficiently numerous
10 parties, common questions of law or fact,” typicality of claims or defenses, and adequacy of
11 representation, as required by Rule 23(a). Id. The party must also satisfy through
12 evidentiary proof at least one of the provisions of Rule 23(b). Comcast Corp. v. Behrend,
13 133 S.Ct. 1426, 1432 (2013). As relevant here, Rule 23(b) permits certification if the Court
14 finds that common questions of law or fact predominate, and that a class action is superior
15 to other available methods of adjudication. Fed.R.Civ.P. 23(b)(3).

16 The district court must conduct a “rigorous analysis” to determine whether the
17 plaintiff has met his or her burden under Rule 23. Mazza v. American Honda Motor Co.,
18 Inc., 666 F.3d 581, 588 (9th Cir. 2012). This “rigorous” analysis applies to both Rule 23(a)
19 and Rule 23(b), and may entail some overlap with the merits of the plaintiffs’ underlying
20 claims because “class determination generally involves considerations that are enmeshed in
21 the factual and legal issues comprising the plaintiff’s [claims].” Comcast, 133 S.Ct. at
22 1432; Amgen Inc. v. Conn. Ret. Plans and Trust Funds, 133 S.Ct. 1184, 1194 (2013).
23 Nevertheless, “Rule 23 grants courts no license to engage in free-ranging merits inquiries at
24 the certification stage.” Amgen, 133 S.Ct. at 1194-1195. “Merits questions may be
25 considered to the extent—but only to the extent—that they are relevant to determining
26 whether the Rule 23 prerequisites for class certification are satisfied.” Id. at 1195. If a
27 court concludes that the moving party has met its burden of proof, then the court has broad
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discretion to certify the class. Zinser v. Accufix Research Institute, Inc., 253 F.3d 1180, 1186 (9th Cir. 2001).

III. DISCUSSION

A. Motion to Exclude

Before addressing Plaintiffs' motion to certify class and for appointment of class counsel, the Court will consider SanDisk's motion to exclude the expert report and testimony of Dr. Sullivan. Plaintiffs retained Dr. Sullivan to provide an economic and econometric analysis of whether the antitrust price injury (i.e., antitrust impact) alleged in the operative complaint is common to all members of the proposed class, and whether "common formulaic proof" of the existence of some price injury will be available at trial for all putative class members. Sullivan Rep. ¶ 11. Dr. Sullivan's report provides his opinions relating to the common antitrust injury caused by allegations that SanDisk has fraudulently procured and enforced the Disputed Patents against its competitors. Id. ¶ 12.

Dr. Sullivan's methodology in evaluating class-wide antitrust injury involved four steps. First, he evaluated "direct" evidence of SanDisk's market power in the markets for NAND flash chips and final flash products by analyzing SanDisk's licensing revenues obtained from competitors through SanDisk's enforcement of the Disputed Patents and SanDisk's licensing practices.⁸ Sullivan Rep. ¶¶ 39-46, 60-87; Sullivan Decl. ¶ 13. Second, Dr. Sullivan evaluated the impact of the Disputed Patents on SanDisk's licensing revenue (i.e., royalty payments) by analyzing the facts and circumstances of SanDisk's license agreements, the growth of SanDisk's patent portfolio over time, and changes in royalties that occurred when the Disputed Patents expired in 2009.⁹ Sullivan Rep. ¶¶ 60-87; Sullivan Decl. ¶ 14. Third, he used SanDisk's sales data to create an econometric

⁸ According to Dr. Sullivan, he corroborated this direct evidence with economic evaluation of market definition, substitutability across products, and market concentration. See Sullivan Decl. ¶ 13.

⁹ Dr. Sullivan claims that such an analysis allows for a determination of the magnitude of royalties that would have occurred "but for" the Disputed Patents. Sullivan Decl. ¶ 14.

1 regression model¹⁰ of SanDisk prices for final flash products, which he asserts explains
 2 more than 93% of the variation in SanDisk's pricing¹¹ and provides the effect of
 3 competitors' costs on SanDisk prices equal to 80.1%, i.e., a \$1.00 increase in competitors'
 4 costs increases SanDisk final flash product prices by \$0.801. Sullivan Rep. ¶¶ 92-101;
 5 Sullivan Decl. ¶ 15. Fourth, Dr. Sullivan combined the results from his licensing analysis
 6 with his econometric model to determine a specific overpayment for each final flash
 7 product sold by SanDisk, which is specific to each customer, product, and time period.
 8 Sullivan Rep. ¶¶ 113-123; Sullivan Decl. ¶ 16. According to Dr. Sullivan, his econometric
 9 model directly measures the effects of SanDisk's competitors' costs on SanDisk's pricing
 10 for final flash products. Sullivan Decl. ¶ 59. He asserts that his empirical analysis uses a
 11 reduced form approach to measure the total effect of competitor costs on SanDisk. *Id.* He
 12 then used the royalty payments to determine the increase in competitor costs and SanDisk's
 13 pricing for final flash products on a product-by-product basis for each SanDisk customer
 14 and time period. *Id.*

15 Dr. Sullivan concluded that each putative class member suffered some antitrust
 16 injury (i.e., overpaid for final flash products) because SanDisk's licensing program, which
 17 was driven in large part by the Disputed Patents, resulted in SanDisk raising its prices (i.e.,
 18 charging supra-competitive prices) on final flash products in response to the increased
 19 prices charged by its competitors due to royalties on NAND flash chips. *See* Sullivan Rep.
 20 ¶¶ 21, 88, 95. According to Dr. Sullivan, his economic analysis shows that a common
 21 methodology can be applied to establish common antitrust price injury from SanDisk's
 22 alleged anti-competitive behavior. *Id.* ¶ 22. Dr. Sullivan claims that his econometric
 23 analysis of SanDisk's sales confirms the relationship between SanDisk's competitors' costs

24 ¹⁰ "A regression analysis is a common statistical tool . . . designed to isolate the
 25 influence of one particular factor - e.g. sex - on a dependent variable - e.g. salary." *Equal*
 26 *Employment Opportunity Comm'n v. Gen. Tel. Co. of Northwest, Inc.*, 885 F.2d 575, 577
 n. 3 (9th Cir. 1989).

27 ¹¹ In other words, Dr. Sullivan claims that his econometric model provides
 28 explanatory factors that explain the vast majority of differences in final flash product prices
 across different products, purchasers, and time periods. Sullivan Rep. ¶ 114.

1 and the elevated prices SanDisk charged for its final flash products, and that an application
 2 of his licensing analysis in the “but-for” world allows for the formulaic calculation of
 3 common price impact and actual damages for purchasers of SanDisk’s final flash products.
 4 Id. ¶ 88. In other words, Dr. Sullivan claims that his methodology demonstrates that
 5 antitrust impact and damages can be proven on a class-wide basis through common proof.

6 Pursuant to Rule 702 and Daubert, SanDisk moves to exclude the expert report and
 7 testimony of Dr. Sullivan on the ground that Dr. Sullivan’s opinions are unreliable and
 8 irrelevant for various reasons.¹² In support of its motion, SanDisk submitted an expert
 9 report prepared by Michael Keeley, Ph.D. (“Dr. Keeley”). Dr. Keeley purports to identify
 10 flaws in Dr. Sullivan’s economic analysis and conclusions. Below, the Court will address
 11 SanDisk’s arguments for excluding Dr. Sullivan’s expert report and testimony.

12 **1. Dr. Sullivan’s Direct Evidence Opinion**

13 Dr. Sullivan opines that SanDisk’s patent enforcement and licensing practices are
 14 direct evidence of the existence and use of market power by SanDisk that is common to all
 15 putative class members. Sullivan Rep. ¶¶ 45-46. According to Dr. Sullivan, “SanDisk’s
 16 ability to earn significant licensing revenue in the marketplace provides direct evidence of
 17 the market power of SanDisk by way of its patents.” Id. ¶ 45. SanDisk contends that Dr.
 18 Sullivan’s direct evidence opinion should be excluded because it is contrary to law as Dr.
 19 Sullivan failed to analyze whether SanDisk restricted market-wide output or imposed
 20 supra-competitive prices, and because Dr. Sullivan did not define or identify the relevant
 21 market in which he asserts there is direct evidence of SanDisk’s market power. In addition,
 22 SanDisk contends that exclusion of Dr. Sullivan’s direct evidence opinion is appropriate

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 24 ¹² SanDisk does not challenge Dr. Sullivan’s qualifications as an expert. Having
 25 reviewed Dr. Sullivan’s curriculum vitae, the Court finds that he is qualified to render
 26 expert opinions in the field of antitrust economics. It is undisputed that Dr. Sullivan earned
 27 his B.A., M.A., and Ph.D. in economics from the University of California, San Diego, and
 28 that Dr. Sullivan has published economic research in peer-reviewed academic journals as
 well as articles on calculating lost profits and reasonable royalty damages. Sullivan Decl. ¶
 7; see also Sullivan Rep. ¶ 7, Exh. A-1. It is also undisputed that Dr. Sullivan has provided
 professional economic consulting services since 1992, including economic analyses on
 issues such as monopolization, restraints of trade, lost profits, and reasonable royalty.
 Sullivan Decl. ¶¶ 1-3, 8; see also Sullivan Rep. ¶ 8, Exh. A-1.

1 because Dr. Sullivan analyzed evidence relating to the wrong market, i.e., the market for
2 NAND flash chips rather than the market for final flash products.

3 The Court rejects SanDisk's arguments. Contrary to SanDisk's contention, Dr.
4 Sullivan specifically identified the relevant market in which he claims there is direct
5 evidence of SanDisk's market power. Citing to the operative complaint, Dr. Sullivan
6 identifies the relevant market as "the market for final flash products, the manufacture, sale,
7 or importation of which is subject to the reach of U.S. patent laws."¹³ Sullivan Rep. ¶ 47.
8 Further, Dr. Sullivan specifically analyzed SanDisk's ability to raise prices to supra-
9 competitive levels in the market for final flash products through its enforcement and
10 licensing of its patents, i.e., SanDisk's exclusionary conduct.¹⁴ See id. §§ 5-6. In doing so,
11 Dr. Sullivan noted that a patent provides a patent holder the right to exclude, and that his
12 "[p]reliminary calculations indicate that between 88% and 100% of worldwide sales of
13 NAND flash memory were subject to SanDisk's pricing or royalty impact." See e.g., id. ¶¶
14 45, 55-59, 68-87. Dr. Sullivan opines that: "Royalties paid by SanDisk's licensees are one
15 cost that increases competitors' costs of production, increases competitors' prices, and thus
16 increases the residual demand for SanDisk's products. As a result of greater residual
17 demand for SanDisk's products, SanDisk was able to sell products at higher prices and
18 greater quantities that it otherwise would have." Sullivan Rep. ¶ 90. According to Dr.
19 Sullivan, his econometric model demonstrates that increased NAND flash chip costs from
20 the payment of royalties resulted in higher SanDisk prices for final flash products from a
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25 ¹³ Dr. Sullivan's report also identifies the submarkets set forth in the operative
26 complaint. Sullivan Rep. ¶ 47.

27 ¹⁴ Enforcement of a patent obtained by fraud constitutes an unlawful exclusionary
28 act. See Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law ¶ 705e (3d ed. 2008).
Such enforcement is not limited to infringement actions, it can also include refusing to
license or "licensing and thus increasing rivals' costs." Id.

1 combination of restricted market-wide output or supra-competitive prices.¹⁵ Sullivan Decl.
2 ¶ 19.

3 Finally, contrary to SanDisk's contention, Dr. Sullivan did not limit his analysis to
4 evidence from the "wrong market," i.e., the NAND flash chip market. Nor does Dr.
5 Sullivan's report "utterly fail[] to explain" how evidence relating to NAND flash chips is
6 connected to his conclusions regarding final flash products. Dr. Sullivan's report explains
7 that NAND flash chips are a fundamental and substantial component of final flash products.
8 Sullivan Rep. ¶¶ 36-38. Further, Dr. Sullivan analyzed both the NAND flash chip market
9 and the final flash product market. See id. §§ 4, 6. According to Dr. Sullivan, an analysis
10 of both markets shows that SanDisk used the Disputed Patents to raise costs in the NAND
11 flash chip market, which raised its competitors' costs and prices in the final flash product
12 and allowed SanDisk to sell its final flash products at higher prices and in greater quantities
13 than it otherwise would have. See id. ¶¶ 88, 90-91; Sullivan Decl. ¶¶ 25-27. To the extent
14 SanDisk challenges the factual basis of Dr. Sullivan's direct evidence opinion, questions
15 regarding the evidence relied upon by Dr. Sullivan go to the weight, not the admissibility,
16 of his opinion. Hangarter v. Provident Life and Acc. Ins. Co., 373 F.3d 998, 1017 n. 14
17 (9th Cir. 2004); see also Manpower, Inc. v. Ins. Co. of Pennsylvania, 732 F.3d 796, 808-

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20 ¹⁵ To determine the impact of SanDisk's competitors' costs on SanDisk's prices for
21 final flash products, Dr. Sullivan utilized linear regression analysis to measure the statistical
22 relationship between SanDisk's prices and the costs of its competitors, controlling for other
23 factors. See Sullivan Rep. ¶¶ 96-97. Dr. Sullivan used the statistical relationships to
24 determine the extent to which higher competitor costs from royalties earned by the
25 Disputed Patents resulted in higher prices paid by consumers for final flash products sold
26 by SanDisk. Id. ¶ 96. Dr. Sullivan asserts that "[s]uch a reduced form [econometric]
27 approach to measuring the effects of costs on prices is supported by published economic
28 literature," and that "[t]he regressions for determining the effect of competitor costs on
SanDisk are based upon economic theory, statistical evaluation, and economic literature."
Id. ¶¶ 96-97. Dr. Sullivan further asserts that a reduced form approach, which is an
econometric technique that measures the overall impact of one variable on another without
requiring separate structural modeling of intermediate variables or steps, is well-accepted
and well supported in published economics literature for estimating the impact of costs on
prices, and is economically appropriate here because separate structural estimation of
restricted output and supra-competitive prices, individually, is not needed to determine the
overall impact of royalties on SanDisk prices. Sullivan Decl. ¶ 20.

809 (7th Cir. 2013) (an expert's reliance on faulty information is a matter to be explored on cross-examination; it does not go to admissibility).

2. Dr. Sullivan's Market Concentration Opinions

In evaluating whether SanDisk had sufficient market power to impose price increases in the marketplace, Dr. Sullivan considered market concentration. Sullivan Rep. ¶ 55. According to Dr. Sullivan, the most common approach to evaluating concentration in the market is known as the Herfindahl-Hirschman Index ("HHI").¹⁶ *Id.* ¶ 57. Dr. Sullivan opines that SanDisk, through its own sales and that of its licensees, likely impacted a very high share of the relevant market. *Id.* ¶ 58. Specifically, Dr. Sullivan states that his "[p]reliminary calculations indicate that between 88% and 100% of worldwide sales of NAND flash memory were subject to SanDisk's pricing or royalty impact." *Id.* SanDisk contends that Dr. Sullivan's market concentration opinions should be excluded for three reasons: (1) Dr. Sullivan predicates his analysis on sales of NAND flash chips rather than final flash products; (2) Dr. Sullivan's opinions are contrary to law because SanDisk's market share of the final flash products market did not exceed 15.3% during the relevant period; and (3) Dr. Sullivan's analysis of the HHI is unhelpful to the trier of fact because such an analysis is irrelevant in a § 2 Sherman Act case.

The Court rejects SanDisk's arguments. First, as discussed above, Dr. Sullivan's economic analysis is not limited to sales of NAND flash chips. Dr. Sullivan specifically analyzed final flash product sales and the relationship between NAND flash chips costs and SanDisk's final flash product sales. *See* Sullivan Rep. ¶¶ 36-37 & §§ 4, 6. Second, SanDisk has not shown that Dr. Sullivan's market concentration opinions are contrary to law. While Courts generally require a 65% market share to establish a prima facie case of market power, *Image Technical Services, Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1206

¹⁶ It is undisputed that the HHI is a widely accepted method used by economists to measure market concentration. *ProMedica Health System, Inc. v. F.T.C.*, 749 F.3d 559, 568 (6th Cir. 2014). The HHI is calculated by summing the squares of the individual firms' market shares. *Id.* HHI data is used to classify markets into three types: unconcentrated markets, moderately concentrated markets, and highly concentrated markets. *Id.*

(9th Cir. 1999), monopoly power in the context of a Walker Process claim can be shown by proof that the fraudulently acquired patent dominated a relevant antitrust market, and thus conveyed substantial power or, in an attempt case, had the potential to do so. See Areeda, et al., Antitrust Law ¶ 705f (patents may facilitate the creation of market power by excluding entry in refusal to license cases, or by raising rivals' costs in the case of actual licensing). Finally, SanDisk has not cited any authority demonstrating that the HHI, which is "[a] commonly used metric for determining market share," see Saint Alphonsus Medical Center-Nampa Inc. v. St. Luke's Health System, Ltd., 778 F.3d 775, 786 (9th Cir. 2015); see also F.T.C. v. PPG Industries, Inc., 798 F.2d 1500, 1503 (D.C. Cir. 1986) ("Market power or the lack of it is often measured by the HHI."), is inapplicable to the facts of this case such that Dr. Sullivan's opinions regarding market concentration should be excluded as unhelpful to the trier of fact.

3. Dr. Sullivan's Opinions Regarding Impact and Damages

SanDisk contends that Dr. Sullivan's theory of impact and damages hinges on his determination that SanDisk would have collected \$1.5 billion less in license fees and royalties in the "but-for" world. SanDisk asserts that an essential aspect of this determination is that, in 1997, SanDisk's licensees would not have been willing to enter into any cross-license agreement with SanDisk absent the '338 patent. SanDisk argues that Dr. Sullivan's opinion "regarding the intent and mental states of SanDisk's licensees underlying their decisions to enter into cross-licensees with SanDisk" is improper. According to SanDisk, Dr. Sullivan's impact and damages opinions should be excluded because Dr. Sullivan impermissibly opines on the intent of SanDisk's licensees in reaching his conclusion regarding the royalties attributable to the Disputed Patents. The Court disagrees.

Contrary to SanDisk's contention, Dr. Sullivan does not impermissibly offer an opinion regarding the intent of any entity that entered into a licensing agreement with SanDisk. Instead, Dr. Sullivan offers his opinions as to how the Disputed Patents impacted the royalties obtained by SanDisk, including what the royalties would have been if SanDisk

1 had not obtained the Disputed Patents. According to Dr. Sullivan, the Disputed Patents
2 played a significant role in SanDisk's ability to earn licensing revenues from its NAND
3 flash technology. Sullivan Rep. ¶ 68. Dr. Sullivan opines that SanDisk's license
4 agreements were driven primarily by the successful enforcement of the '338 patent, and
5 that SanDisk's licensing program would have been significantly impaired without the
6 Disputed Patents. Id. ¶¶ 68-73. Dr. Sullivan concluded that "but-for" SanDisk's alleged
7 fraudulent obtainment of the Disputed Patents, it is "plausible" that SanDisk would have
8 received very little licensing revenues, if any, from its NAND flash technology licensing.
9 Id. ¶ 68. In reaching his opinions regarding how the Disputed Patents impacted the
10 royalties obtained by SanDisk, Dr. Sullivan analyzed SanDisk's licensing agreements,
11 evidence relating to SanDisk's licensing program, SanDisk demand letters, litigation
12 involving SanDisk's patents, the value of SanDisk's foreign patents compared to its U.S.
13 patents, published literature, and the decline in royalties when the Disputed Patents expired.
14 Id. ¶¶ 69-77. Dr. Sullivan asserts that public research confirms that economic value is
15 commonly concentrated in a relatively small number of patents within a larger patent
16 portfolio. Id. ¶ 75. SanDisk, for its part, failed to proffer any authority or analysis
17 demonstrating that Dr. Sullivan's impact or damages opinions should be excluded on the
18 ground that he impermissibly opines on the intent of SanDisk's licensees.¹⁷

19 **4. Dr. Sullivan's Opinions Regarding Pass-Through and SanDisk's** 20 **Competitive Response**

21 SanDisk contends that Dr. Sullivan's testimony regarding "pass-through" is
22 inadmissible because it is based on unsupported assumptions about how royalty costs
23 purportedly attributable to the Disputed Patents were passed through the distribution chain
24 and SanDisk's competitive response. Specifically, SanDisk argues that Dr. Sullivan
25 impermissibly assumes the following based solely on economic theory: (1) SanDisk's
26 NAND flash chip manufacturer licensees passed on 100% of the allegedly unlawful

27 ¹⁷ To the extent SanDisk objects to portions of Dr. Sullivan's deposition testimony,
28 the Court will not address those objections. Plaintiffs do not rely on Dr. Sullivan's
deposition testimony to satisfy any of Rule 23's requirements.

1 overcharge attributable to the Disputed Patents to flash product manufacturers; (2) flash
2 product manufacturers, in turn, raised their prices on final flash products; and (3) SanDisk
3 always raised its prices for final flash products in response to the increased prices charged
4 by its competitors. According to SanDisk, Dr. Sullivan's impact and damages opinions
5 should be excluded as unreliable because Dr. Sullivan failed to evaluate whether there is
6 any "real-world" evidence to support his assumptions. In addition, SanDisk argues that Dr.
7 Sullivan's impact and damages opinions should be excluded because his assumptions do
8 not fit the facts of the case as they are inconsistent with "real-world" evidence regarding
9 conditions in the flash memory industry.

10 The Court finds SanDisk's arguments unpersuasive. As an initial matter, SanDisk
11 failed to show that Dr. Sullivan's opinions are predicated on the assumption of 100% pass-
12 through or the assumption that SanDisk always raised its own prices for final flash products
13 in response to the increased prices of its competitors. Indeed, a review of Dr. Sullivan's
14 report reveals that he did not assume 100% pass-through; rather, he calculated the overall
15 pass-through rate to be 80.1% using regression analysis. See Sullivan Rep. § 6. Further,
16 Dr. Sullivan did not rely solely on "economic theory" in rendering his impact and damages
17 opinions. As set forth above, Dr. Sullivan utilized linear regression analysis to measure the
18 extent to which higher competitors' costs from royalties earned from the Disputed Patents
19 resulted in higher prices paid by consumers for SanDisk's final flash products. See id. §
20 6.2.3. Dr. Sullivan's methodology, which is described in detail on pages 48-54 of his
21 report, indicates that his analysis for determining the effect of competitors' costs on
22 SanDisk prices for final flash products is based on economic theory, economic literature,
23 and statistical evaluation. Id. In performing his regressions, Dr. Sullivan relied upon
24 SanDisk's sales data and NAND flash chip sales data provided by Semico Research Corp.
25 ("Semico"), a semiconductor marketing and consulting research company that provides,
26 among other things, the marketplace price of purchasing NAND flash chips for use in final
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28

1 flash products.¹⁸ Id. ¶¶ 79, 97. SanDisk has failed to show that Dr. Sullivan’s methodology
 2 suffers from serious flaws such that his impact and damages opinions should be excluded as
 3 unreliable. SanDisk’s arguments regarding Dr. Sullivan’s flawed assumptions go to the
 4 weight, not the admissibility, of his impact and damages opinions. See Cotton v. City of
 5 Eureka, Cal., 2010 WL 5154945, at *13 (N.D. Cal. 2010) (“The matter of whether the
 6 assumptions underlying Dr. Bonnell’s opinions are accurate is germane to the weight, as
 7 opposed to the admissibility, of his opinions.”) (citing Hangarter, 373 F.3d at 1017 n. 14;
 8 Bergen v. F/V St. Patrick, 816 F.2d 1345, 1352 n. 5 (9th Cir. 1987)).

9 Finally, the Court rejects SanDisk’s argument that Dr. Sullivan’s impact and
 10 damages opinions should be excluded on the ground that his 100% pass-through
 11 assumptions do not fit the facts of this case because they are contrary to market realities.
 12 According to SanDisk, Dr. Sullivan’s opinions are inconsistent with Dr. Keeley’s empirical
 13 analysis, which illustrates that SanDisk frequently did not raise its NAND flash chip prices
 14 when its costs of NAND flash chip production increased and often did not raise prices for
 15 its final flash products in response to cost increases. SanDisk’s objection goes to the
 16 weight, not the admissibility, of Dr. Sullivan’s opinions. Disputes over the results reached
 17 and assumptions made with respect to competing methodologies are issues to be decided by
 18 the trier of fact. See In re Online DVD Rental Antitrust Litigation, 2010 WL 5396064, at
 19 *10 (N.D. Cal. 2010). At the class certification stage, the issue is not which expert is the
 20 most credible, or the most accurate modeler, but rather whether the plaintiffs have
 21 advanced a plausible methodology to demonstrate that antitrust injury can be proved on a
 22 class-wide basis. Id.

23 **5. Dr. Sullivan’s Linear Regression Analysis**

24 SanDisk contends that Dr. Sullivan’s linear regression analysis should be excluded
 25 as unreliable because it is incapable of analyzing the impact of competitors’ NAND flash

26 ¹⁸ The Semico data includes worldwide revenue, units, and average selling prices for
 27 NAND chips on a monthly basis. Sullivan Rep. ¶ 79. The Semico data also includes
 28 worldwide revenues, units, and average selling prices for USB drives, memory cards, solid
 state hard drives, MP3 players, and portable media players on a quarterly basis. Id.

1 chip costs on SanDisk's prices for final flash products (i.e., the very relationship he
2 purports to study). According to Dr. Keeley, the average NAND flash chip price that Dr.
3 Sullivan derives from the Semico data has no impact on the results of his regression
4 analysis because the results of Dr. Sullivan's econometric model are the same when the
5 price derived from the Semico data is removed from the model and replaced with a value
6 equal to one. In addition, SanDisk contends that Dr. Sullivan's regression analysis should
7 be excluded because his econometric model cannot establish any relationship between
8 royalties paid to SanDisk and the prices of SanDisk's final flash products as Dr. Sullivan's
9 analysis neither includes any measure of SanDisk's royalties nor estimates a relationship
10 between SanDisk's royalties and the price of SanDisk's final flash products.

11 The Court finds that SanDisk has failed to demonstrate that Dr. Sullivan's linear
12 regression analysis should be excluded. SanDisk does not dispute that regression analysis
13 is a reliable methodology that is well-accepted in the field of antitrust economics. See, e.g.,
14 In re High-Tech Employee Antitrust Litigation, 2014 WL 1351040, at *14 (N.D. Cal. 2014)
15 (nothing that courts have recognized that "regression analysis is generally a reliable method
16 for determining damages in antitrust cases and is 'a mainstream tool in economic study' ").
17 Instead, SanDisk argues that Dr. Sullivan's regression analysis is inadequate because of the
18 data he used, i.e., the Semico data. However, such an objection goes to the weight, not the
19 admissibility, of Dr. Sullivan's opinions. See Hemmings v. Tidyman's Inc., 285 F.3d 1174,
20 1188 (9th Cir. 2002) ("[I]n most cases, objections to the inadequacies of a study are more
21 appropriately considered an objection going to the weight of the evidence rather than its
22 admissibility."); see also Obrey, 400 F.3d at 696 (same). As noted above, the question at
23 this juncture is not whether Dr. Sullivan's regression analysis is correct or supported by
24 reliable facts but rather whether his analysis is the product of a generally accepted method
25 for demonstrating antitrust impact and damages through common evidence. In re Online
26 DVD Rental, 2010 WL 5396064, at *10; see In re Aftermarket Automotive Lighting
27 Products Antitrust Litigation, 276 F.R.D. 364, 373-374 (C.D. Cal. 2011) ("the Court is not
28 supposed to decide at the certification stage which expert analysis or model is better").

SanDisk's objection to the data used by Dr. Sullivan raises an issue to be decided by the trier of fact. In re Online DVD Rental, 2010 WL 5396064, at *10.¹⁹

Similarly, SanDisk's objection regarding Dr. Sullivan's failure to establish a relationship between royalties paid to SanDisk and the prices of SanDisk's final flash products is not a proper basis to exclude Dr. Sullivan's regression analysis. While Dr. Sullivan does not include royalties as a separate variable in his regression analysis, his econometric model evaluates the effects of competitors' costs on SanDisk's pricing for final flash products. Dr. Sullivan then used the royalty payments to establish a relationship between the royalties paid to SanDisk and the prices of SanDisk's final flash products on a product-by-product basis for each customer and time period, i.e., Dr. Sullivan used the royalty payments to determine the increase in competitors' costs and prices for San Disk's final flash products on a product-by-product basis for each customer and time period. See Sullivan Rep. ¶¶ 97-99; Sullivan Decl. ¶ 59.²⁰ To the extent SanDisk criticizes Dr. Sullivan

¹⁹ In its reply brief, SanDisk reiterates its argument that Dr. Sullivan's econometric model is incapable of determining any effect of the Semico data. SanDisk contends that the fatal flaw in Dr. Sullivan's "methodology" is "caused by a well-recognized error known as 'perfect collinearity.'" Contrary to SanDisk's contention, this "error" is not a sufficient basis to exclude Dr. Sullivan's regression analysis. Regressions have been admitted in the face of expert disagreement regarding whether collinearity posed a problem. See In re High Fructose Corn Syrup Antitrust Lit., 295 F.3d 651, 660-661 (7th Cir. 2002); see also In re High-Tech Employee, 2014 WL 1351040, at *21 n. 51 (noting that the admission of such regressions "is not surprising given that the concept of collinearity is not a *methodology*, but a common phenomenon that results when using the methodology of regression analysis") (emphasis in original) (citing Daubert, 509 U.S. at 595 ("The focus [of the admissibility inquiry], of course, must be solely on principles and methodology, not on the conclusions that they generate."))).

²⁰ Dr. Sullivan calculated his competitor NAND flash chip costs variable by multiplying the number of gigabytes per SanDisk product by the price per gigabyte derived from the market-wide data on NAND flash [chip] sales provided by Semico. Sullivan Rep. ¶ 97(d). Dr. Sullivan then calculated royalties per gigabyte in the worldwide NAND marketplace over time and connected them to the SanDisk sales data based on the time period and capacity of each SanDisk product. Id. ¶ 99. According to Dr. Sullivan, royalties calculated in this way for each SanDisk sale represent the actual royalties paid by competitors and the royalties that would have been paid by competitors but for SanDisk's alleged fraudulent obtainment of the patents-at-issue. Id. Dr. Sullivan opines that the coefficients from the regression model can be combined with the percentage decrease in competitor NAND flash chip costs resulting from lower royalties to calculate the overpayment associated with each sale in the SanDisk data. Id. Dr. Sullivan concludes that damages to any individual customer can be determined based on the sum total of this overpayment across all NAND flash products purchased from SanDisk. Id.

1 for not including royalties as a separate variable in his regression analysis, this criticism
2 does not justify exclusion. The selection of variables to include in a regression analysis is
3 normally a question that goes to weight of the expert's analysis rather than its admissibility.
4 Rudebusch v. Hughes, 313 F.3d 506, 516 (9th Cir. 2002) (citing Bazemore v. Friday, 478
5 U.S. 385, 400 (1986) ("Normally, failure to include variables will affect the analysis'
6 probativeness, not its admissibility."); Maitland v. Univ. of Minnesota, 155 F.3d 1013,
7 1017 (8th Cir. 1998) (if a regression analysis omits variables, it is for the finder of fact to
8 consider the variables that have been left out of an analysis, and the reasons given for the
9 omissions, and then to determine the weight to accord the study's results)); see In re TFT-
10 LCD (Flat Panel) Antitrust Litigation, 267 F.R.D. 583, 604 (N.D. Cal. 2010) (plaintiffs are
11 not required to prove the merits of their case-in-chief at the class certification stage; they
12 need not demonstrate that their multiple regression analysis captures all the proper variables
13 and thus reaches the "right" answer). SanDisk has not shown that Dr. Sullivan's regression
14 analysis suffers from serious methodological flaws such that it should be excluded.

15 Finally, to the extent Dr. Keeley used a "version" of Dr. Sullivan's model and
16 determined that the royalties paid to SanDisk did not have any positive effect on the prices
17 for SanDisk's final flash products when Dr. Sullivan's competitors' NAND flash chip cost
18 variable is reduced by the amount of royalties that Dr. Sullivan asserts that SanDisk
19 received, this is not a proper basis to exclude Dr. Sullivan's opinions. When experts reach
20 different conclusions at the class certification stage, it is not for the Court to decide which
21 expert's analysis is correct. See In re Aftermarket Automotive Lighting Products, 276
22 F.R.D. at 373-374; Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1314 (Fed. Cir. 2014) ("A
23 judge must be cautious not to overstep its gatekeeping role and weigh facts, evaluate the
24 correctness of conclusions, impose its own preferred methodology, or judge credibility,
25 including the credibility of one expert over another. These tasks are solely reserved for the
26 fact finder.").

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1 **6. Dr. Sullivan's Damages Calculations**

2 SanDisk contends that Dr. Sullivan's opinion as to damages outside the class period
3 defined in the operative complaint (i.e., prior to June 25, 2006) should be excluded because
4 it is irrelevant. In addition, SanDisk contends that Dr. Sullivan's opinion regarding
5 prejudgment interest prior to the filing of the complaint should be excluded as contrary to
6 law. The Court finds SanDisk's objections to be premature. Whether Plaintiffs are entitled
7 to recover damages prior to June 25, 2006 or prejudgment interest prior to the filing of the
8 complaint is irrelevant for purposes of determining whether class certification is
9 appropriate. As such, the Court will not reach the merits of SanDisk's objections.

10 **7. Conclusion**

11 For the reasons stated above, the Court finds that SanDisk has failed to demonstrate
12 that Dr. Sullivan's expert report or any of his opinions should be excluded as unreliable or
13 irrelevant. Accordingly, because Plaintiffs have sustained their burden to show that the
14 requirements for admissibility under Rule 702 and Daubert have been met by a
15 preponderance of the evidence, SanDisk's motion to exclude is DENIED.

16 **B. Motion for Class Certification**

17 Plaintiffs contend that class certification is appropriate because the requirements of
18 Rule 23(a) are satisfied, and because this action meets the requirements of Rule 23(b)(3),
19 i.e., common questions of law or fact predominate and a class action is superior to other
20 available methods of adjudication. SanDisk disagrees, arguing that class certification
21 should be denied because Plaintiffs have failed to establish that common issues will
22 predominate or that Plaintiffs are adequate and typical class representatives. Thus, SanDisk
23 does not dispute that Rule 23(a)'s numerosity, ascertainability, and commonality
24 requirements have been met. Below, the Court will address the requirements of Rule 23 in
25 turn.

26 **1. Rule 23(a)**

27 To satisfy Rule 23(a), the party seeking class certification must show: (1) the class is
28 so numerous that joinder of all members is impracticable; (2) there are questions of law or

fact common to the class; (3) the claims or defenses of the representative parties are typical of the claims or defenses of the class; and (4) the representative parties will fairly and adequately protect the interests of the class. Fed.R.Civ.P. 23(a).

a. Numerosity and Ascertainability

Rule 23(a)(1) requires that the class must be “so numerous that joinder of all members is impracticable.” Fed.R.Civ.P. 23(a)(1). In addition, the class should be “ascertainable,” Mazur v. eBay Inc., 257 F.R.D. 563, 567 (N.D. Cal. 2009), meaning that the class definition must be “definite enough so that it is administratively feasible for the court to ascertain whether an individual is a member,” O’Connor v. Boeing N. Am., Inc., 184 F.R.D. 311, 319 (C.D. Cal. 1998). Here, SanDisk’s records establish that there were 285 direct purchasers of final flash products during the class period defined in the operative complaint. Keeley Rep. ¶ 44. This is sufficient to satisfy the numerosity and ascertainability requirements. In general, courts find that the numerosity factor is satisfied when the class includes 40 or more members. See Jordan v. Los Angeles County, 669 F.2d 1311, 1319 (9th Cir.), vacated on other grounds, 459 U.S. 810 (1982); see also Consolidated Rail Corp. v. Town of Hyde Park, 47 F.3d 473, 482 (2d Cir. 1995) (“numerosity is presumed at a level of 40 members”).

b. Commonality

Rule 23(a)(2) requires that “there are questions of law or fact common to the class.” Fed.R.Civ.P. 23(a)(2). “Commonality focuses on the relationship of common facts and legal issues among class members.” Hanlon v. Chrysler Corp., 150 F.3d 1011, 1021 (9th Cir. 1998). The commonality requirement of Rule 23(a)(2) is met where “the class member’ claims ‘depend upon a common contention’ such that ‘determination of its truth or falsity will resolve an issue that is central to the validity of each [claim] with one stroke.’” Mazza, 666 F.3d at 588 (citation omitted). Thus, plaintiffs seeking to certify a class must “demonstrate ‘the capacity of classwide proceedings to generate common answers’ to common questions of law or fact that are ‘apt to drive the resolution of the litigation.’ ” Id. “The commonality preconditions of Rule 23(a)(2) are less rigorous than

1 the companion [predominance] requirements of Rule 23(b)(3).” Hanlon, 150 F.3d at 1019.
2 “[C]ommonality only requires a single significant question of law or fact.” Mazza, 666
3 F.3d at 589.

4 The Court finds that the commonality requirement has been satisfied. Common
5 questions of law and fact are involved in determining whether SanDisk is liable for
6 violating § 2 of the Sherman Act predicated on a Walker Process theory of liability.
7 Common questions amenable to resolution on a class-wide basis exist as to whether
8 SanDisk fraudulently procured the Disputed Patents, used those patents to facilitate the
9 creation of market power by raising its competitors’ costs through licensing agreements and
10 royalty payments, and charged supra-competitive prices for its final flash products in
11 response to its competitors raising their prices for such products due to the royalty
12 payments. These questions are subject to generalized proof and are capable of class-wide
13 resolution. SanDisk does not dispute that Plaintiffs have satisfied the commonality
14 requirement. Instead, SanDisk argues that Plaintiffs have failed to demonstrate that
15 common questions of law or fact predominate. This issue is discussed below.

16 **c. Typicality and Adequacy**

17 Rule 23(a)(3) requires the representative party to have claims that are “typical of the
18 claims . . . of the class.” Fed.R.Civ.P. 23(a)(3). In order for a court to find typicality, “[a]
19 class representative must be part of the class and possess the same interest and suffer the
20 same injury as the class members.” Dukes, 131 S.Ct. at 2550; see Prado–Steiman ex rel.
21 Prado v. Bush, 221 F.3d 1266, 1279 (11th Cir. 2000) (typicality may not be established
22 unless the named representative has individual standing to raise the legal claims of the
23 class); Turcios v. Carma Laboratories, Inc., 296 F.R.D. 638 (C.D. Cal. 2014) (same).
24 Typicality is satisfied “when each class member’s claim arises from the same course of
25 events, and each class member makes similar legal arguments to prove the defendant’s
26 liability.” Rodriguez v. Hayes, 591 F.3d 1105, 1124 (9th Cir. 2010) (citations omitted).
27 The typicality requirement is permissive and requires only that the representative’s claims
28

1 are “reasonably co-extensive with those of the absent class members; they need not be
2 substantially identical.” Hanlon, 150 F.3d at 1020.

3 Rule 23(a)(4) requires that “the representative parties will fairly and adequately
4 protect the interests of the class.” Fed.R.Civ.P. 23(a)(4). Resolution of two questions
5 determines whether this requirement has been satisfied: (1) do the named plaintiffs and
6 their counsel have any conflicts of interest with other class members; and (2) will the
7 named plaintiffs and their counsel prosecute the action vigorously on behalf of the class?
8 Hanlon, 150 F.3d at 1020. The adequacy requirement “serves to uncover conflicts of
9 interest between named parties and the class they seek to represent.” Amchem Products,
10 Inc. v. Windsor, 521 U.S. 591, 625 (1997) (citations omitted). A district court must “ensure
11 that the named plaintiffs have incentives that align with those of absent class members so as
12 to assure that the absentees’ interests will be fairly represented.” Prado–Steiman, 221 F.3d
13 at 1279. Proposed class representatives have a conflict of interest with the absent putative
14 class members if they do not have standing to assert certain claims that may be available to
15 the absent class members. See Lierboe v. State Farm. Mut. Auto. Ins. Co., 350 F.3d 1018,
16 1022-1023 (9th Cir. 2003) (finding that class representatives must have standing to bring all
17 claims held by the putative class to which they belong and which they purport to represent).

18 SanDisk contends that ESE and MFLASH are not adequate class representatives
19 because they did not purchase any SanDisk products during the class period defined in the
20 operative complaint. In addition, SanDisk contends that Ritz and CPM are not typical or
21 adequate class representatives because they lack standing. Specifically, SanDisk argues
22 that Ritz and CPM do not have standing because they did not purchase products in the SSD,
23 wireless memory, and embedded storage markets, and because they did not suffer injury in
24 the market where competition was allegedly being restrained, i.e., the NAND flash chip
25 market. Finally, SanDisk contends that Ritz and CPM’s claims are not typical of the claims
26 of the proposed class members because their purchases were substantially smaller and
27 based on different terms than the high-volume retailers and distributors that account for the
28 bulk of the putative class members’ damages.

1 In response, Plaintiffs do not dispute that neither ESE nor MFLASH purchased final
2 flash products during the class period defined in the operative complaint, i.e., on or after
3 June 25, 2006. Instead, they argue that ESE and MFLASH purchased final flash products
4 during the class period defined in the instant motion, i.e., on or after July 1997. The Court
5 rejects Plaintiffs' attempt to dramatically expand the class period defined in the operative
6 complaint by nearly nine years. Plaintiffs have not cited any authority demonstrating that it
7 is proper for the Court to make such a major change to the class definition at this late stage
8 of the litigation without an amendment of the operative complaint. Courts addressing this
9 issue have refused to consider certifying a class beyond the definition provided in the
10 operative complaint. See Johnson v. Harley-Davidson Motor Co. Group, LLC, 285 F.R.D.
11 573, 577 n. 2 (E.D. Cal. 2012) (court is bound by the class definition provided in the
12 complaint); Costelo v. Chertoff, 258 F.R.D. 600, 604 (C.D. Cal. 2009) ("The Court is
13 bound to class definitions provided in the complaint and, absent an amended complaint,
14 will not consider certification beyond."); Berlowitz v. Nob Hill Masonic Management, Inc.,
15 1996 WL 724776, at *2 (N.D. Cal. 1996) (refusing to consider a broader class definition
16 than that which was contained in the complaint; stating that the court was "bound by the
17 class definition provided in the complaint" and that it would "not consider certification of
18 the class beyond the definition provided in the complaint unless plaintiffs choose to amend
19 it). Accordingly, because it is undisputed that neither ESE nor MFLASH purchased final
20 flash products during the class period defined in the operative complaint, ESE and
21 MFLASH do not have standing to assert claims on behalf of the proposed class. As such,
22 the typicality and adequacy requirements are not satisfied as to these Plaintiffs. Solis v.
23 Regis Corp., 2006 WL 2925682, at *8 (N.D. Cal. 2006) ("Because Plaintiff is not a
24 member of the putative . . . class, she is neither a typical nor an adequate representative of
25 that class."); see General Telephone Co. of Southwest v. Falcon Falcon, 457 U.S. 147, 156
26 (1982) ("We have repeatedly held that a class representative must be part of the class")

27 As for SanDisk's contention that Ritz and CPM lack standing, the Court is
28 unpersuaded by this argument. SanDisk's argument that Ritz and CPM lack standing

1 because they did not suffer injury in the market where competition was allegedly being
2 restrained (i.e., the NAND flash chip market) is without merit. Plaintiffs' theory of
3 monopoly power is predicated on anti-competitive conduct that affected both the NAND
4 flash chip market and the final flash product market. As discussed above, Plaintiffs
5 contend that SanDisk raised its competitors' costs in the upstream market for final flash
6 products by enforcing the Disputed Patents and extracting royalties from participants in the
7 downstream NAND flash chip market. According to Plaintiffs, because NAND flash chips
8 are critical components for all final flash products, SanDisk's enforcement of the Disputed
9 Patents in the NAND flash chip market raised its competitors' costs in the market for final
10 flash products because SanDisk's competitors paid more for flash chips. Plaintiffs further
11 assert that, in response to the higher prices charged by its competitors in the final flash
12 product market, SanDisk was able to raise its prices for final flash products, causing the
13 proposed class members to pay an unlawful overcharge.

14 The Court also rejects SanDisk's argument that Ritz and CPM lack standing because
15 they did not purchase SSD, wireless memory, or embedded storage. While it is undisputed
16 that neither of these Plaintiffs purchased such products, Ritz and CPM's claims are
17 reasonably co-extensive with those of the absent class members to satisfy the typicality
18 requirement. Ritz and CPM's claims, like the putative class members' claims, arise from
19 the same course of events and are based on the same Walker Process antitrust theory of
20 liability. Pecover v. Electronic Arts Inc., 2010 WL 8742757, at *11 (N.D. Cal. 2010) ("In
21 antitrust cases, typicality usually 'will be established by plaintiffs and all class members
22 alleging the same antitrust violations by defendants.'"); see In re TFT-LCD, 267 F.R.D. at
23 593 ("The typicality requirement does not mandate that the products purchased, methods of
24 purchase, or even damages of the named plaintiffs must be the same as those of the absent
25 class members. . . . [T]he various products purchased and the different amount of damage
26 sustained by individual plaintiffs do not negate a finding of typicality, provided the cause of
27 those injuries arises from a common wrong."). Ritz and CPM possess the same interest and
28 have suffered the same alleged injury as the absent class members, i.e., overpayment for

1 final flash products. They will seek to prove that they were harmed by the same course of
2 allegedly unlawful conduct in the same way as the putative class members. As such, their
3 interests are fully consistent with those of the proposed class.²¹

4 Finally, SanDisk has failed to demonstrate that Ritz and CPM's claims are not
5 typical of the claims of the absent class members because their purchases were substantially
6 smaller and based on different terms than the high-volume retailers and distributors that
7 account for the bulk of the putative class members' damages. SanDisk has not directed the
8 Court to any evidence in the record showing that Ritz's or CPM's purchases were
9 substantially smaller and based on different terms than the retailers and distributors that
10 purportedly account for the bulk of the putative class' damages. But even if it had, SanDisk
11 has failed to show that such disparities defeat typicality. Ritz and CPM possess the same
12 interest and have suffered the same injury as the absent class members based on conduct
13 which is not unique to them. To prove their claims, Ritz and CPM will have to show that
14 the prices putative class members paid for SanDisk final flash products were artificially
15 inflated by the anti-competitive conduct of SanDisk, i.e., the enforcement of the Disputed
16 Patents. SanDisk has not cited any authority supporting the conclusion that the typicality
17 requirement has not been met. The two district court cases SanDisk cited (but failed to
18 analyze) are factually distinguishable, and do not support a finding that Ritz's or CPM's
19 claims are not typical of the claims of the absent class members. Ritz and CPM's theory of
20 liability is the same as the absent class members and there has been no showing that either
21 of their individual circumstances are markedly different from the circumstances of the
22 putative class members to defeat typicality.

23
24 ²¹ Without citation to authority or legal analysis, SanDisk asserts that Ritz and CPM
25 are not adequate representatives of class members whose claims are barred by a prior
26 settlement. The Court rejects SanDisk's unsupported argument. It is not the role of the
27 Court to make the parties' arguments for them. See *Indep. Towers of Wash. v. Wash.*, 350
28 F.3d 925, 929 (9th Cir. 2003). That aside, SanDisk's argument fails on the merits. Even if
some of the absent class members' claims are barred by a prior settlement, SanDisk has
failed to show how such circumstances demonstrate that Ritz's or CPM's interests are
antagonistic to any member of the proposed class or that either entity will be unable to
prosecute this action vigorously on behalf of the proposed class.

1 In sum, the Court finds that Plaintiffs have satisfied the typicality requirement as to
2 Ritz and CPM. This action is based on conduct which is not unique to them, and the
3 putative class members have been injured by the same course of conduct. Hanon, 976 F.2d
4 at 508. The Court also finds that Plaintiffs have satisfied the adequacy requirement.
5 SanDisk failed to demonstrate that Ritz or CPM is an inadequate class representative
6 because they lack standing. Further, there is no evidence demonstrating that Ritz, CPM, or
7 their counsel has any conflicts of interest with other putative class members. Nor is there
8 any evidence showing that Ritz's, CPM's, or their counsel's interest in this case is
9 insufficient to ensure vigorous prosecution of this action on behalf of the proposed class.
10 Ritz and CPM's counsel has extensive experience with class actions and complex litigation,
11 Pls.' Mot. Exhs., H-K, and the record reflects that they have vigorously litigated this action
12 in furtherance of the interests of the absent class members. SanDisk does not challenge the
13 experience of Ritz and CPM's counsel or their capability of vigorously prosecuting this
14 litigation.

15 **d. Conclusion**

16 The Court finds that Plaintiffs have demonstrated that the four requirements of Rule
17 23(a) have been met. Plaintiffs have shown that the proposed class is ascertainable and so
18 numerous that joinder of all members is impracticable, there are questions of law and fact
19 common to the class, the claims of the Ritz and CPM are typical of the claims of the
20 putative class members, and that Ritz, CPM, and their counsel will fairly and adequately
21 protect the interests of the class.

22 **2. Rule 23(b)(3)**

23 Under Rule 23(b)(3), a plaintiff must demonstrate the superiority of maintaining a
24 class action and show "that the questions of law or fact common to class members
25 predominate over any questions affecting only individual members." Fed.R.Civ.P.
26 23(b)(3). SanDisk does not contend that Plaintiffs have failed to demonstrate the
27 superiority of maintaining a class action. Rather, SanDisk argues that Plaintiffs have not
28 shown that common issues will predominate.

a. Predominance

Rule 23(b)(3) “permits certification only if ‘the court finds that the questions of law or fact common to class members predominate over any questions affecting only individual members.’ ” Comcast, 133 S.Ct. at 1430. This requirement must be satisfied “through evidentiary proof.” Id. at 1431. The predominance criterion is far more demanding than Rule 23(a)’s commonality requirement. Amchem, 521 U.S. at 623-624. The predominance analysis focuses on “the legal or factual questions that qualify each class member’s case as a genuine controversy” in order to determine “whether proposed classes are sufficiently cohesive to warrant adjudication by representation.” Id. at 623. “Rule 23(b)(3) requires a showing that *questions* common to the class predominate, not that those questions will be answered, on the merits, in favor of the class.” Amgen, 133 S.Ct. at 1191 (emphasis in original). “[T]he office of a Rule 23(b)(3) certification ruling is not to adjudicate the case; rather, it is to select the ‘metho[d]’ best suited to adjudication of the controversy ‘fairly and efficiently.’ ” Id.

The test for predominance is met when there exists generalized evidence which proves or disproves an issue or element on a simultaneous, class-wide basis, since such proof obviates the need to examine each class members’ individual position. In re Optical Disk Drive Antitrust Litigation, 303 F.R.D. 311, 318 (N.D. Cal. 2014). The Ninth Circuit has held that “ ‘there is clear justification for handling the dispute on a representative rather than an individual basis’ if ‘common questions present a significant aspect of the case and they can be resolved for all members of the class in a single adjudication. . . .’ ” Mazza, 666 F.3d at 589. In the Ninth Circuit, “damage calculations alone cannot defeat certification.” Leyva v. Medline Indus. Inc., 716 F.3d 510, 513 (9th Cir. 2013); see also Yokoyama v. Midland Nat. Life Ins. Co., Yokoyama v. Midland Nat. Life Ins. Co., 594 F.3d 1087, 1094 (9th Cir. 2010).

“Considering whether ‘questions of law or fact common to class members predominate’ begins . . . with the elements of the underlying cause of action.” Erica P. John Fund, Inc. v. Halliburton Co., 131 S.Ct. 2179, 2181 (2011). Under a Walker Process

theory of antitrust liability, the plaintiff must show that the defendant procured the relevant patents by knowing and willful fraud on the PTO, and must prove all the elements otherwise necessary to establish a Sherman Act monopolization charge. Ritz Camera & Image, LLC v. SanDisk Corp., 700 F.3d 503, 506 (Fed. Cir. 2012). These elements include: (1) an antitrust violation; (2) antitrust “impact” or injury resulting from the antitrust violation; and (3) damages sustained as a result of the antitrust violation. In re Hydrogen Peroxide Antitrust Litigation, 552 F.3d 305, 311 (3d Cir. 2008).

i. Antitrust Violation

To establish an antitrust violation under § 2 of the Sherman Act, a plaintiff must show that: (1) the defendant possessed monopoly power in the relevant market; and (2) the defendant willfully acquired or maintained that power through “anti-competitive conduct,” as opposed to gaining that power as a “consequence of a superior product, business acumen, or historical accident.” Image Tech. Serv., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1202, 1208 (9th Cir. 1997) (willful acquisition or maintenance of monopoly power involves exclusionary conduct); see also Delano Farms Co. v. Cal. Table Grape Comm’n, 655 F.3d 1337, 1351 (Fed. Cir. 2011) (“To establish the antitrust portion of a Walker Process allegation, a plaintiff must show that the defendant held monopoly power in the relevant market and willfully acquired or maintained that power by anticompetitive means.”). Monopoly power in the context of a Walker Process claim can be shown by proof that the fraudulently acquired patent dominated a relevant antitrust market, and thus conveyed substantial power or, in an attempt case, had the potential to do so. See Areeda, et al., Antitrust Law ¶ 705f (patents may facilitate the creation of monopoly power by excluding entry in refusal to license cases, or by raising rivals’ costs in the case of actual licensing).

1 SanDisk contends that class certification should be denied because Plaintiffs cannot
2 establish an antitrust violation with common proof.²² Specifically, SanDisk argues that
3 Plaintiffs offer no evidence - much less a class-wide methodology - for establishing market
4 power. In addition, SanDisk argues that “[e]ven if Plaintiffs had demonstrated a class-wide
5 means of establishing that SanDisk possessed market power, they would have had to
6 demonstrate that the market power flows from the Disputed Patents.” According to
7 SanDisk, Plaintiffs failed to do so because Dr. Sullivan did not analyze the exclusionary
8 scope of the Disputed Patents.

9 The Court finds that Plaintiffs have satisfied the predominance requirement with
10 respect to the antitrust violation element of their monopolization claim. The question of
11 whether there has been an antitrust violation is a common issue rather than an individual
12 one. In no event will the individual circumstances of particular class members be relevant
13 to the inquiry of whether such a violation has occurred. The adjudication of this issue will
14 turn on common legal and factual issues. The claims of Plaintiffs and the absent class
15 members arise out of the same course of events and are based on the same Walker Process
16 theory of antitrust liability. Plaintiffs will rely on common evidence to establish an
17 antitrust violation, i.e., to show that the Disputed Patents were fraudulently procured and
18 used by SanDisk to acquire and maintain monopoly power in the final flash product market.
19 SanDisk does not dispute that the issue of whether the Disputed Patents were fraudulently
20 procured is a common question that can be resolved for all members of the class through
21 generalized evidence. Further, contrary to SanDisk’s contention, Plaintiffs have offered a
22 plausible class-wide methodology to establish market power. To show market power

23
24 ²² SanDisk asserts that Plaintiffs’ failure to demonstrate that they can establish the
25 market power element of their antitrust claims on a class-wide basis with common proof is
26 discussed in detail in their motion to exclude, which “SanDisk hereby incorporates by
27 reference.” The Court rejects SanDisk’s attempt to incorporate arguments by reference that
28 it made in its motion to exclude. Allowing litigants to engage in such conduct would
provide an effective means of deliberately circumventing page limits on briefs set forth in
the Civil Local Rules and this Court’s Civil Standing Orders. This Court only considers
arguments that are specifically and distinctively raised by the parties in their briefs. In any
event, the Court has already considered and rejected the arguments SanDisk seeks to
incorporate by reference.

1 through common evidence, Plaintiffs have offered the economic analysis of Dr. Sullivan.
2 While SanDisk raises various objections to the adequacy of Dr. Sullivan's analysis
3 regarding market power, these objections do not show that individual issues predominate.
4 SanDisk's objections go to the merits of Dr. Sullivan's analysis. The relevant inquiry,
5 however, is whether market power is capable of being proved at trial through common
6 evidence. The Court finds that Plaintiffs have sufficiently made this showing. The issue of
7 market power can be resolved for all members of the class in a single adjudication through
8 generalized evidence.

9 **ii. Antitrust Impact and Damages**

10 Antitrust impact or antitrust injury is the damage that results from an antitrust
11 violation. In re High-Tech Employee, 985 F.Supp.2d at 1192. “ ‘It is the causal link
12 between the antitrust violation and the damages sought by plaintiffs.’ ” Id. To satisfy the
13 predominance requirement, Plaintiffs must show: (1) that the existence of individual injury
14 arising from the SanDisk's alleged actions is “capable of proof at trial through evidence . . .
15 common to the class rather than individual to its members[;]” and (2) that “the damages
16 resulting from that injury [are] measurable ‘on a class-wide basis’ through the use of a
17 ‘common methodology.’ ” Comcast, 133 S.Ct. at 1430 (citation omitted). At the class
18 certification stage, “any model supporting a plaintiff's damages case must be consistent
19 with its liability case.” Id. at 1433. Thus, a court can only certify a Rule 23(b)(3) class if
20 there is evidence demonstrating the existence of a class-wide method of awarding relief that
21 is consistent with the Plaintiffs' theory of liability. Astiana v. Ben & Jerry's Homemade,
22 Inc., 2014 WL 60097, at *12 (N.D. Cal. 2014).

23 The Court finds that Plaintiffs have satisfied the predominance requirement with
24 respect to the antitrust impact and damages elements of their monopolization claim.
25 Plaintiffs have shown that questions common to the proposed class predominate and that
26 the proposed class is sufficiently cohesive to warrant certification. Plaintiffs have advanced
27 a plausible methodology (i.e., Dr. Sullivan's economic analysis) to show that the existence
28 of antitrust injury arising from SanDisk's alleged anticompetitive conduct is capable of

1 proof at trial through evidence common to the proposed class, and that the damages
2 resulting from the antitrust injury are measurable through the use of a common
3 methodology. SanDisk has not offered any authority or analysis showing that the
4 predominance requirement has not been met. SanDisk does not dispute that regression
5 analysis is a standard way to show antitrust impact and damages. See In re TFT-LCD, 267
6 F.R.D. at 605-606; In re Live Concert Antitrust Litigation, 247 F.R.D. 98, 145-146 (C.D.
7 Cal. 2007) (citing cases). Nor has SanDisk argued that Dr. Sullivan's econometric model
8 supporting Plaintiffs' damages case is inconsistent with Plaintiffs' liability case. Instead,
9 SanDisk argues that Dr. Sullivan's economic analysis is fundamentally and fatally flawed
10 for various reasons identified by its expert, Dr. Keeley.²³ SanDisk's arguments in this
11 regard are similar to the arguments SanDisk made in connection with its motion to exclude.
12 To the extent these arguments are directed to the merits of Dr. Sullivan's economic analysis
13 and conclusions, they are insufficient to support a finding that individual issues
14 predominate. As noted above, the relevant question is whether Plaintiffs have advanced a
15 plausible methodology to demonstrate that antitrust injury and damages can be proven on a
16 class-wide basis through the use of a common methodology. California v. Infineon
17 Technologies AG, 2008 WL 4155665, at *9 (N.D. Cal. 2008). In situations where a court
18 is confronted with two opposing expert analyses or econometric models, the Court is not at
19 liberty to decide at the certification stage which expert analysis or model is better. See In re
20 Aftermarket Automotive Lighting Products, 276 F.R.D. at 373-374 (the Court's inquiry at
21

22 ²³ For example, SanDisk argues that Dr. Sullivan's opinion as to the impact of the
23 Disputed Patents is not grounded in economic reality because, among other things, his
24 methodology for interpolating the Disputed Patents' royalty share between 1998 and 2008
25 is fundamentally flawed, and because he assumes, without empirical support, that the value
26 of the Disputed Patents was common across licensees. In addition, SanDisk argues that Dr.
27 Sullivan's pass-through opinion is "riddled" with flawed assumptions, and that Dr. Sullivan
28 failed to perform empirical analysis that would support his assumption that SanDisk
responded to supposed final flash product increases by its competitors by raising prices of
its own products. SanDisk also argues that Dr. Sullivan's regression model provides no
evidence that competitors' costs affect SanDisk's final flash product prices, and that Dr.
Sullivan's model improperly assumes common impact and cannot be used to establish a
relationship to estimate the impact of royalties attributable to the Disputed Patents on
SanDisk's prices because royalty data is not used in the regression.

1 the class certification stage is limited to determining whether plaintiffs have made a
2 sufficient showing that the evidence they intend to present concerning antitrust impact will
3 be made using generalized proof common to the class and that these common issues will
4 predominate); In re Ethylene Propylene Diene Monomer (EPDM) Antitrust Litigation, 256
5 F.R.D. 82, 100 (D. Conn. 2009) (“[T]he issue at class certification is not which expert is the
6 most credible, or the most accurate modeler, but rather have the plaintiffs demonstrated that
7 there is a way to prove a class-wide measure of damages through generalized proof.”);
8 Natchitoches Parish Hosp. Serv. Dist. v. Tyco Intern., Ltd., 247 F.R.D. 253, 270 (D. Mass.
9 2008) (“To determine predominance, a court need not plunge into the weeds of an expert
10 dispute about potential technical flaws in an expert methodology.”). While SanDisk has
11 raised numerous objections to Dr. Sullivan’s economic analysis and conclusions, it has not
12 shown that Dr. Sullivan’s methodology is so flawed as to preclude class certification.
13 SanDisk has not shown that Plaintiffs have failed to offer a plausible way to demonstrate
14 antitrust impact and damages on a class-wide basis.

15 As for SanDisk’s remaining arguments, the Court finds that they are insufficient to
16 show that the predominance requirement has not been satisfied. SanDisk argues that
17 individualized proof is required to determine whether a putative class member was
18 impacted because the “bulk” of its final flash product sales were made pursuant to
19 individually negotiated transactions. The Court rejects this argument. Courts have held
20 that even if there is considerable individual variety in pricing because of individual price
21 negotiations, plaintiffs may succeed in proving class-wide impact by showing that the
22 minimum baseline for beginning negotiations, or the range of prices which resulted from
23 negotiation, was artificially raised by anti-competitive actions of the defendant. See, e.g.,
24 In re Commercial Tissue Products Antitrust Litigation, 183 F.R.D. 589, 595 (N.D. Fla.
25 1998); In re Industrial Diamonds Antitrust Litigation, 167 F.R.D. 374, 383 (S.D.N.Y.
26 1996); In re NASDAQ Mkt.-Makers Antitrust Litigation, 169 F.R.D. 493, 523 (S.D.N.Y.
27 1996). Here, Plaintiffs’ theory of antitrust liability is predicated on SanDisk’s fraudulent
28 procurement and use of the Disputed Patents to raise competitors’ costs in the upstream

1 final flash products market by extracting royalty payments from participants in the
2 downstream flash chip market. Thus, under Plaintiffs' theory of liability, the baseline for
3 price negotiations for SanDisk's final flash products was artificially inflated by the royalty
4 payments. In other words, Plaintiffs claim that the prices which resulted from the
5 SanDisk's price negotiations were artificially raised by SanDisk's anti-competitive conduct.

6 The Court also rejects SanDisk's argument that class certification should be denied
7 on the ground that Dr. Sullivan's model is unreliable because he used aggregated and
8 averaged data to establish antitrust impact. SanDisk contends that Dr. Sullivan's use of
9 averages "masks" substantive variation in the proposed class. Courts have rejected similar
10 arguments and held that averaged and aggregated data is not fatal to econometric models
11 used to measure the extent of pass-through of component costs in the prices paid for end-
12 use products. See In re TFT-LCD, 267 F.R.D. at 605 ("a number of courts have held that
13 averaged and aggregated data may be used to demonstrate pass-through"); see also In re
14 Static Random Access memory (SRAM) Antitrust Litigation, 264 F.R.D. 603, 614 (N.D.
15 Cal. 2009); In re Cathode Ray Tube (CRT) Antitrust Litigation, 2013 WL 5391159, at *8
16 (N.D. Cal. 2013).

17 Finally, the Court rejects SanDisk's conclusory argument that antitrust impact
18 cannot be established on a class-wide basis because SanDisk's alleged "anti-competitive
19 conduct was directed to a component of the overall price of a product." SanDisk did not
20 cite any controlling authority supporting its position. Further, SanDisk failed to provide
21 any elaboration or analysis of the district court cases it cited. The Court finds SanDisk's
22 undeveloped argument unconvincing. See Indep. Towers of Wash., 350 F.3d at 929. That
23 aside, a review of the cases cited by SanDisk reveals that they are readily distinguishable
24 from the facts of this case, and none of them holds, as SanDisk appears to suggest, that
25 antitrust impact cannot be shown on a class-wide basis where the alleged anti-competitive
26 conduct is directed at a component of a product.

27 ///

28 ///

b. Superiority

Rule 23(b)(3) requires that a class action be “superior to other methods for the fair and efficient adjudication of the controversy.” Hanlon, 150 F.3d at 1023. Under Rule 23(b)(3), the Court must consider four non-exclusive factors in evaluating whether a class action is a superior method of adjudicating Plaintiffs’ claims: (1) the interest of each class member in individually controlling the prosecution or defense of separate actions; (2) the extent and nature of any litigation concerning the controversy already commenced by or against the class; (3) the desirability of concentrating the litigation of the claims in the particular forum; and (4) the difficulties likely to be encountered in the management of a class action. Zinser, 253 F.3d at 1190-1192. Where individual class members’ possible recoveries are so small that no other practical method of adjudication exists, superiority is often satisfied. See Amchem, 521 U.S. at 617.

The Court finds that the superiority requirement is satisfied. In an antitrust action, when common questions are found to predominate, “courts generally have ruled that the superiority prerequisite of Rule 23(b)(3) is satisfied.” See In re Cathode Ray Tube (CRT) Antitrust Litigation, 2013 WL 5429718, at *23 (N.D. Cal. 2013) (citing Wright, Miller & Kane, Federal Practice and Procedure: Civil Procedure § 1781, at 254-255 (3d ed. 2004)). Here, given the common legal and factual issues involved in this case, and given that it is undisputed that the possible recoveries for many of the putative class members are too small to justify the costs of litigating their claims individually, the Court finds that class treatment is superior to other methods for the fair and efficient adjudication of this case. See In re Static Random Access (SRAM) Antitrust Litigation, 2008 WL 4447592, at *10 (N.D. Cal. 2008) (“In antitrust cases such as this, the damages of individual direct purchasers are likely to be too small to justify litigation, but a class action would offer those with small claims the opportunity for meaningful redress.”). SanDisk does not contend that any of the relevant factors weigh in favor of a finding that a class action is not the superior method for adjudicating the claims alleged in the operative complaint.

///

c. Conclusion

The Court finds that Plaintiffs have demonstrated that the superiority and predominance requirements of Rule 23(b)(3) have been met. Plaintiffs have shown the superiority of maintaining a class action, and that questions of law and fact common to the proposed class predominate over any questions affecting only individual members. Accordingly, Plaintiffs' motion for class certification is GRANTED IN PART. The Court certifies the class defined in the operative complaint.

C. Appointment of Class Representatives

Plaintiffs seek an order appointing Ritz, CPM, ESE, and MFLASH as class representatives. As discussed above, ESE and MFLASH do not have standing to bring claims on behalf of the class defined in the operative complaint. As such, Plaintiffs request to appoint ESE and MFLASH as class representatives is DENIED. However, Plaintiffs request to appoint Ritz and CPM as class representatives is GRANTED. For the reasons set forth above, the Court finds that Ritz and CPM are adequate class representatives.

D. Appointment of Class Counsel

"[A] court that certifies a class must appoint class counsel." Fed.R.Civ.P. 23(g)(1). In appointing class counsel, the court must consider: "(i) the work counsel has done in identifying or investigating potential claims in the action; (ii) counsel's experience in handling class actions, other complex litigation, and the types of claims asserted in the action; (iii) counsel's knowledge of the applicable law; and (iv) the resources that counsel will commit to representing the class." Fed.R.Civ.P. 23(g)(1)(A). A court may also "consider any other matter pertinent to counsel's ability to fairly and adequately represent the interests of the class." Fed.R.Civ.P. 23(g)(1)(B).

Plaintiffs request the Court appoint Kellogg, Huber, Hansen, Todd, Evans & Figel P.L.L.C., Berry Law P.L.L.C., and Stueve, Siegel, Hanson LLP as class counsel. Plaintiffs also request the Court appoint Morgan, Duffy-Smith & Tidalgo LLP as liaison counsel. SanDisk does not challenge the adequacy of Plaintiffs' counsel or otherwise object to Plaintiffs' request for appointment of counsel. Having reviewed the evidence submitted by

1 Plaintiffs in connection with their request for appointment of counsel, the Court finds that
2 Plaintiffs' counsel possess sufficient experience, knowledge of the applicable law, and
3 resources to represent the proposed class in this matter. See Pls.' Mot., Exhs. H-K. In
4 addition, the record reflects that Plaintiffs' counsel has expended considerable resources
5 investigating and litigating the claims alleged in this action. Finally, there is no evidence
6 suggesting that Plaintiffs' counsel will not fairly or adequately represent the interests of the
7 class. Accordingly, the Court appoints Kellogg, Huber, Hansen, Todd, Evans & Figel
8 P.L.L.C., Berry Law P.L.L.C., and Stueve, Siegel, Hanson LLP as class counsel. In
9 addition, the Court appoints Morgan, Duffy-Smith & Tidalgo LLP as liaison counsel.

10 **IV. CONCLUSION**

11 For the reasons stated above, IT IS HEREBY ORDERED THAT:

12 1. Plaintiffs' motion to certify class and for approval of class counsel is
13 GRANTED IN PART. The Court certifies the following class: "All persons residing in the
14 United States who, on or after June 25, 2006, directly purchased from SanDisk, or from its
15 controlled and licensed joint venture with Toshiba Corporation, final flash products using
16 technology claimed to be patented by SanDisk ("Final Flash Product Class"). Such
17 products include, without limitation, those SanDisk sold to retail firms, original equipment
18 manufacturers ("OEMs"), and distributors. Purchases of final flash products that contain a
19 microcontroller, a semiconductor that interfaces with electronic equipment and operates the
20 flash memory, are included in the Final Flash Product Class. Purchases of flash memory
21 combined with dynamic random access memory ("DRAM"), flash memory combined with
22 static random access memory ("SRAM"), or flash memory combined with a
23 microprocessor ("system on a chip") are excluded from the Class."

24 2. Ritz and CPM are appointed as class representatives.

25 3. Kellogg, Huber, Hansen, Todd, Evans & Figel P.L.L.C., Berry Law P.L.L.C.,
26 and Stueve, Siegel, Hanson LLP are appointed as class counsel. Morgan, Duffy-Smith &
27 Tidalgo LLP is appointed as liaison counsel.

5. Because this Order may contain information within the scope of the parties' protective order, this Order shall remain under seal pending further Order of the Court. By no later than May 29, 2015, the parties shall jointly advise the Court which facts, if any, they contend should be redacted from the public version of this ruling. To the extent any party seeks redaction of any portion of the Court's ruling, such party shall provide the Court with the legal authority for such request and a proposed redacted order for public disclosure.

IT IS SO ORDERED.

Sandra B. Armstrong
SAUNDRA BROWN ARMSTRONG
United States District Judge